

June 13, 1968

DRAFT OF SUGGESTED REMARKS FOR MR. WEBB
AT THE
UNIVERSITY OF TENNESSEE SPACE INSTITUTE

Tullahoma, Tennessee

Dr. Goethert, General Lundquist, Congressman Evins, ladies and gentlemen.

It is a pleasure to be here this evening as one of the speakers in the University of Tennessee Space Institute lecture series.

The University of Tennessee Space Institute has a special place in the regard, the high regard, of us at NASA. It is an outstanding example of a case where vigorous and able local effort is succeeding in accomplishing one of the most important things NASA has been trying to help bring about in its first ten years - to find ways to bring the capabilities of government and the capabilities of universities together in a productive relationship where each draws on the strengths of the other and the result is a net gain for the nation, in the training of graduate students, in the accomplishment of important research, and in the broadening of the horizons of technology and our multidisciplinary understanding of its impact and significance. The establishment of this institute as an integral part of the University of Tennessee located adjacent to and working closely with the Arnold Engineering Development Center, and the strong and enthusiastic support given to the enterprise by the State, the University, and the Center are successfully demonstrating a new pattern for progress which I have hoped will be one of the lasting benefits of our efforts - to advance aeronautics and space in the first ten years and one of the most important means for further advances in the future.

There are other reasons why NASA has special interest in the University of Tennessee Space Institute. One derives from the fact that only _____ miles away is our Marshall Space Flight Center. There are already many close working relationships between Marshall and AEDC, but one of the things I have been exploring with Chairman Evins and others is what can be done to bring these institutions into an even more meaningful set of relationships. I believe that the University of Tennessee Space Institute here at Tullahoma could play an important role in this. The University of Alabama group at Huntsville - which works closely with the Marshall Center - might also become a partner. In the Tennessee Valley you have had pioneering experience for over thirty years and have set a strong precedent for looking beyond state lines and joining efforts in large undertakings. Perhaps Chairman Evins and I (- and all of us -) should think in terms of a Tennessee Valley Aeronautics and Space Authority Association - another TVA - to provide a framework for pooling and enhancing the intellectual and technical strengths of all the institutions in the region concerned with aeronautics and space and their impact and importance for our nation.

My other special interest in the University of Tennessee Space Institute and in being here today, is in its close relationship with the Air Force, through its Arnold Engineering Development Center. We at NASA have always regarded a close and effective relationship with the Air Force - and other arms of the Department of Defense - as one of our most important objectives. We have received much from the Air Force:

the boosters we first worked with, like Atlas and Titan; range support at the Eastern and Western Test Ranges; outstanding officers to manage our largest undertakings, like General Phillips as Apollo Program Director and General O'Connor as Director of Industrial Operations at Huntsville, and much more. I should mention especially the essential and invaluable test work done here at AEDC, going first to problems with the Vanguard _____ stage in 19__ and continuing down to the work now going on on the J-2 engine, the Lunar Module engines, and others.

We have, I believe, done much for the Air Force in return, although ^{regard} we do not ~~regard~~ it as an exchange but as one of NASA's basic reasons for existence. We have, for example, developed the technology of synchronous communication satellites. Syncom I and Syncom II were turned over to the Department of Defense for operational use when their experiments were completed, and the technology they demonstrated is being applied in the operational systems being established by the Air Force for the Department of Defense, and in the INTELSAT satellites operated by the ComSat for world wide communications of ^{which} ~~which~~ the Air Force and the DOD are heavy users. Another outstanding example is, of course, the Gemini system, which is being adapted by the Air Force for use in the MOL. Also of fundamental importance is NASA's continuing and expanding work in aeronautics, which although less in the public eye, is continuing, as you know, in the NACA pattern and tradition to provide advanced aeronautical research and design data in support of military aircraft development in all three services.

The founding of the AEDC was a part of a major coordinated step by NACA and the Air Force to advance the nation's capabilities in aeronautics-- both for aeronautical research and for its application to meet the needs of national security. The same Act of Congress, Public Law _____, authorized both the "Unitary Wind Tunnel Plan" and the establishment of an "Air Engineering Development Center" for the Air Force. The wind tunnels and engine test facilities built at NACA centers and at AEDC under this plan have provided the background for the nation's advances in military aeronautics ~~xx~~ in the past decade and a half. The nation owes a great debt to the vision, daring and judgment of the leaders in the Air Force, the NACA, and the Congress who recognized the need, advocated, and saw through to completion over half a billion dollars worth of aeronautical test facilities of a magnitude and capability for greater than any previously requested as necessary or feasible. This was done, I must add, not on the basis of specific requirements for a specific system, but on the broad premise that advanced facilities were a prerequisite for advanced research and technology, and that advanced research and technology-- developed in advance--were a prerequisite for building the systems on which our national security would depend in the future.

Today we need the same kind of vision, daring, and judgment as we face the problems of the next ten years in aeronautics and space, especially as they affect our national security. In many ways we are at a turning point as important, perhaps more important than that faced by the framers of the Unitary Wind Tunnel Plan and AEDC ACT of 19____.

They saw potential technological advances in aeronautics that could affect the balance of military power among nations; they saw that the Germans had been moving far ahead of us at the end of World War II; ~~and~~ ~~they~~ ~~also~~ ~~saw~~ ~~that~~ they faced strong pressures to reduce budgets and the necessity to control inflation in the post-war period; and they saw that the nation faced an uncertain future in Europe as the Cold War crystallized and in Asia as we took the leadership in the free world's response to the Communist attack in Korea. xxx

Now we can see potential technological advances in space as well as aeronautics which can even more fundamentally affect, and perhaps even will determine the balance of power among great nations in the next decade. We can see that the USSR is advancing with a strong program in both space and aeronautics at a pace which will keep them far ahead of us as we reduce our efforts in the face of other urgent and legitimate national needs. We, like them, face the requirement to reduce ^{budgets} ~~budgetary~~ and to control inflation. We, too, see an uncertain and difficult future for the nation in the world arena, and know that it will take the greatest of skill and diplomacy, backed up by real power--military, economic, and political, to maintain a proper position in the world for the United States and the ideals it stands for, in the decade of the 1970's.

To provide the basis for this power in the 1970's we have to do many things. We have to deal effectively with the problems of today. We have to deal with the military and political situation in Viet Nam. We have to

be prepared for trouble in the Middle East if it comes. And we must certainly have to deal wisely and effectively with our domestic problems--in the cities and in education, for example. But we also must be sure that we do not, in our concentration on these matters, neglect to take the steps we can and must to provide the technological base and advanced systems on which the realities of power in the 1970's will depend. It is our responsibility--the responsibility of all of us represented here: NASA, the Air Force, the universities, your Space Institute, and last but by no means least, the Congress--to think carefully on this problem, foster constructive discussions and debate of the issues, and do all we can to see that the nation moves in the right direction.

As I have testified to Congress, NASA has begun serious discussions of these and other fundamental questions with senior officials in the Department of Defense and other agencies of the government. We are also working closely with each of the military services. For example, in the past several months I and all my senior associates have met as a group in turn with the Chief of Staff of the Air Force, all the Deputy Chiefs of Staff, and others; with the Chief of Naval Operations and his senior associates; and the Chief of Staff of the Army and the members of his Army General Staff--to discuss with them the ways in which NASA and the services are now working together and explore further ways in which NASA's activities and capabilities could support military and other national needs.

In these meetings and in our planning within NASA, we are endeavoring to arrive at an understanding of what the nation's true needs are in the next ten years in space and aeronautics and the related advanced technologies, and then of what the role of NASA should be in helping meet these needs.

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I have a strong feeling/in the next ten years the NASA program should be more closely related to the national security needs and to the needs of the military services, especially those of the United States Air Force. I hope, as we consider these matters with the Department of Defense and others, and together ponder the uncertainties, assess the possibilities, and face realistically the necessities for lower budgets in the immediate future, that we can develop a sound joint position that will make the best use of the assets in facilities, experience, and trained personnel that we both have and can support, to place the United States in as strong a position as possible for the decade ahead.

Let me complete my talk this evening by mentioning briefly some of the specific areas to which we are ~~going~~ giving special consideration in our thinking about the future national needs in aeronautics and space and how NASA and the Department of Defense can best team up to meet them.